

**REMARKS**

Claims 1-5 are presented in this application. The Title reflects the changes made during the International Phase of this application. Applicants have amended the specification for purposes of adding the priority information. Further, appropriate headings have been inserted on accordance to 37 CFR 1.77. Claim 1 has been amended to reflect US practice, and no change in claim scope is intended. Applicants have attached an Abstract on a separate sheet of paper as required by US practice. Amendments to the Abstract are made to comply with US practice.

It is respectfully submitted that the present application is in condition for allowance. An early consideration and Notice of Allowance are earnestly solicited.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge any fees or credit any overpayment, particularly including any fees required under 37 CFR Sect 1.16 or 1.17, and any necessary extension of time fees, to deposit Account No. 07-1392.

Respectfully submitted:

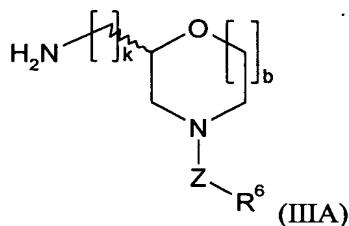
Dated: 9/14/2004

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**PROCESS FOR THE PREPARATION OF MORPHOLINE DERIVATIVES  
AND INTERMEDIATES THEREFORE**

**Abstract**

Processes for the preparation of a compound of formula (IIIA)



or a salt thereof are disclosed. ;

wherein;

Z represents a bond, CO, SO<sub>2</sub>, CR<sup>10</sup>R<sup>7</sup>(CH<sub>2</sub>)<sub>n</sub>, (CH<sub>2</sub>)<sub>n</sub>CR<sup>10</sup>R<sup>7</sup>, CHR<sup>7</sup>(CH<sub>2</sub>)<sub>n</sub>O,  
CHR<sup>7</sup>(CH<sub>2</sub>)<sub>n</sub>S, CHR<sup>7</sup>(CH<sub>2</sub>)<sub>n</sub>OCO, CHR<sup>7</sup>(CH<sub>2</sub>)<sub>n</sub>CO, COCHR<sup>7</sup>(CH<sub>2</sub>)<sub>n</sub> or SO<sub>2</sub>CHR<sup>7</sup>(CH<sub>2</sub>)<sub>n</sub>;

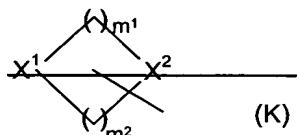
R<sup>6</sup> represents C<sub>1-6</sub>alkyl, C<sub>2-6</sub>alkenyl, aryl, heteroaryl, aryl-C<sub>2-6</sub>alkenyl, CN or a group of formula Y<sup>3</sup>-J<sup>3</sup>;

R<sup>7</sup> represents hydrogen, C<sub>1-4</sub>alkyl, CONR<sup>8</sup>R<sup>9</sup> or COOC<sub>1-6</sub>alkyl;  
a and b represent 1 or 2, such that a+b represents 2 or 3;

n represents an integer from 0 to 4;

M represents a C<sub>3-8</sub>cycloalkyl or C<sub>3-8</sub>cycloalkenyl group fused to a monocyclic aryl or monocyclic heteroaryl group;

J<sup>3</sup> represents a moiety of formula (K):



wherein X<sup>1</sup> represents oxygen, NR<sup>11</sup> or sulphur, X<sup>2</sup> represents CH<sub>2</sub>, oxygen, NR<sup>12</sup> or sulphur, m<sup>1</sup> represents an integer from 1 to 3 and m<sup>2</sup> represents an integer from 1 to 3, provided that m<sup>1</sup>+m<sup>2</sup> is in the range from 3 to 5, also provided that when both X<sup>1</sup> and X<sup>2</sup> represent oxygen, NR<sup>11</sup>, NR<sup>12</sup> or sulphur, m<sup>1</sup> and m<sup>2</sup> must both not equal less than 2, wherein K is optionally substituted by one or more (e.g. 1 or 2) Y<sup>3</sup>-aryl, Y<sup>3</sup>-heteroaryl, Y<sup>3</sup>-CO-aryl, COC<sub>3-8</sub>cycloalkyl, Y<sup>3</sup>-CO-heteroaryl, C<sub>1-6</sub>alkyl, Y<sup>3</sup>-COOC<sub>1-6</sub>alkyl, Y<sup>3</sup>-CO-C<sub>1-6</sub>alkyl, Y<sup>3</sup>-W, Y<sup>3</sup>-CO-W, Y<sup>3</sup>-NR<sup>15</sup>R<sup>16</sup>, Y<sup>3</sup>-

~~CONR<sup>15</sup>R<sup>16</sup>, hydroxy, exo, Y<sup>3</sup>-SO<sub>3</sub>NR<sup>15</sup>R<sup>16</sup>, Y<sup>3</sup>-SO<sub>2</sub>C<sub>1-6</sub>alkyl, Y<sup>3</sup>-SO<sub>2</sub>aryl, Y<sup>3</sup>-SO<sub>2</sub>heteroaryl, Y<sup>3</sup>-NR<sup>12</sup>C<sub>1-6</sub>alkyl, Y<sup>3</sup>-NR<sup>12</sup>SO<sub>2</sub>C<sub>1-6</sub>alkyl, Y<sup>3</sup>-NR<sup>12</sup>CONR<sup>15</sup>R<sup>16</sup>, Y<sup>3</sup>-NR<sup>12</sup>COOR<sup>14</sup> or Y<sup>3</sup>-OCONR<sup>15</sup>R<sup>16</sup> groups, and is optionally fused to a monocyclic aryl or heteroaryl ring;~~

~~R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, R<sup>13</sup> and R<sup>14</sup> independently represent hydrogen or C<sub>1-6</sub>alkyl;~~

~~R<sup>15</sup> and R<sup>16</sup> independently represent hydrogen or C<sub>1-6</sub>alkyl or R<sup>15</sup> and R<sup>16</sup> together with the nitrogen atom to which they are attached may form a morpholine, piperidine or pyrrolidine ring;~~

~~R<sup>17</sup> and R<sup>18</sup> independently represent hydrogen or C<sub>1-6</sub>alkyl;~~

~~W represents a saturated or unsaturated, non aromatic 5-7 membered ring containing between 1 and 3 heteroatoms selected from nitrogen, oxygen or sulphur, optionally substituted with one or more C<sub>1-6</sub>alkyl, halogen or hydroxy groups;~~

~~Y<sup>1</sup>, Y<sup>2</sup> and Y<sup>3</sup> independently represent a bond or a group of formula -  
(CH<sub>2</sub>)<sub>p</sub>CR<sup>6</sup>R<sup>4</sup>(CH<sub>2</sub>)<sub>q</sub> wherein R<sup>6</sup> and R<sup>4</sup> independently represent hydrogen or C<sub>1-4</sub>alkyl or R<sup>6</sup> and R<sup>4</sup> may together with the carbon atom to which they are attached form a C<sub>3-8</sub>cycloalkyl group, and p and q independently represent an integer from 0 to 5 wherein p + q is an integer from 0 to 5; and;~~

~~k is 1 or 2;~~

~~are disclosed.~~